Pediatric Special Health Care Needs: CSF Shunts

I. All Provider Levels

1. Follow the General Patient Care guidelines in section A1.

2. Establish patient responsiveness.

   A. If cervical spine trauma is suspected, manually stabilize the spine.

3. Assess the patient's airway and breathing including rate, auscultation, inspection, effort and adequacy of ventilation as indicated by chest rise.

   A. If the child has a tracheostomy tube, follow the tracheostomy protocol in section V1 to assess and manage the tracheostomy tube in addition to these protocols.

4. If no breathing is present, manually ventilate the patient at an age-appropriate rate.

   A. If there are obvious signs of Cushing's triad (decreased heart rate and blood pressure, and irregular respiratory rate), ventilate at a rate of 35 times per minute for an infant and 25 times per minute for a child.

Note Well: ***Do Not Hyperventilate!***

5. If airway cannot be maintained, begin ventilations with B-V-M and initiate advanced airway management using a combi-tube.

Note Well: *Do not use a combi-tube on a patient younger than 16 years of age or less than 5-feet tall.*

Note Well: *The EMT-I and EMT-P should use ET intubation.*

I. All Provider Levels (continued)

6. Check pulse.

   A. If no pulse is present, begin chest compressions and follow the appropriate protocol.

7. Assess circulation and perfusion.

   A. Obtain a pulse oximeter reading.

8. Ask the caregivers for the child's baseline vital signs.

9. Assess for signs and symptoms of shunt obstruction or shunt infection.

> ***Note Well:*** *Signs and symptoms of shunt obstruction or infection include headache, nausea, vomiting, increased sleep, blurred vision, irritability, loss of coordination, altered mental status, bradycardia or other arrhythmias, redness along the shunt track, apnea, seizures, high pitched cry, fever, or full or bulging fontanel*

10. Assess for signs and symptoms of increased intracranial pressure.

11. Obtain a complete history including a history of the present illness and past medical history.

12. For signs and symptoms of shock, follow the appropriate medical protocols.

13. Call for ALS support.

14. If breathing is adequate, place the child in a position of comfort and administer 100% oxygen.

15. Elevate the child's head.

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II. Advanced Life Support Providers

1. Initiate cardiac monitoring.

   A. Treat any arrhythmias with the appropriate algorithm.

III. Transport Decision

1. Bring any of the child's medical charts or medical forms that the caregiver may have, as well as any supplies that the parent may have.

> ***Note Well:*** *Some caregivers carry a "go bag" for their children with extra supplies. Ask the parent if they have a "go bag" or similar bag for their child and bring it to the hospital.*

2. Initiate transport to the nearest appropriate facility as soon as possible.

3. Perform focused history and detailed physical exam en route to the hospital.

4. Reassess at least every 3-5 minutes, more frequently as necessary and possible.

This protocol was developed and revised by Children's National Medical Center, Center for Prehospital Pediatrics, Division of Emergency Medicine and Trauma Services, Washington, D.C.

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